

ABSTRACT OF THE DISCLOSURE

A protective device for transmitting electromagnetic signals of a desired frequency band from a source to a load comprises an outer conductor, an inner conductor extending coaxially within the outer conductor and a quarter wavelength shunt conductor. A radio frequency impedance control (RFIC) tube is used to maintain the proper transmission line impedance for the device. The shunt conductor is connected, at one end, to the inner conductor and extends along a multi-curved path through an opening in the RFIC tube and wraps around the RFIC tube in at least one plane. The other end of the stub is connected to the outer conductor either directly or indirectly by means of distributed capacitance through a dielectric insulator. A plurality of gas discharge tubes may be coupled to the shunt conductor to shunt undesired voltages. In use, the inner conductor serves as the transmission line, the outer conductor serves as the return path and the quarter wavelength shunt conductor serves as an inductor for filtering out electromagnetic energy which falls outside the desired frequency band.